What is claimed is:

1. A method for reshaping the cornea of an eye under a flap of corneal tissue which comprises the steps of:

cutting a subsurface layer of stromal tissue, said subsurface layer being an interface between a interior surface for said flap and a bed of stromal tissue, said interior surface located on said flap opposite a portion of the anterior surface of the cornea and at a selected distance therefrom;

incising the cornea to create a peripheral edge for said flap of corneal tissue, said interior surface of said flap being bounded by said peripheral edge;

lifting said flap to expose said bed;

photoaltering at least a portion of said bed of stromal tissue to correct the visual acuity of the eye; and

repositioning said flap over said bed.

2. A method as recited in claim 1 wherein said selected distance is variable to create a convex shape for said interior surface of said flap.

3. A method as recited in claim 1 wherein said selected distance is variable to create a concave shape for said interior surface of said flap.

4. A method as recited in claim 1 wherein said bed of stromal tissue has a boundary and said boundary is substantially in the shape of a circle.

5. A method as recited in claim 1 wherein said bed of stromal tissue has a boundary and said boundary is substantially in the shape of a oval.

6. A method as recited in claim 1 wherein said incising step and said cutting step are accomplished using a pulsed laser beam.

7. A method as recited in claim 6 wherein said photoaltering step is accomplished using an excimer laser.

8. A method as recited in claim 1 wherein said peripheral edge of said flap borders said portion of the anterior surface of the cornea and said peripheral edge of said flap has a substantially uniform predetermined depth.

9. A method as recited in claim 1 wherein said peripheral edge of said flap is formed with a tab to assist in lifting and repositioning of said flap.

10. A method as recited in claim 1 wherein said peripheral edge of said flap is formed with an interlocking feature to hold said flap in place after said repositioning step.

11. A method as recited in claim 1 wherein said photoaltering step is accomplished using a pulsed infrared laser.

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12. A method for reshaping the cornea of an eye under a flap of corneal tissue which comprises the steps of:

focusing the rays of a pulsed laser beam within the stroma of the cornea to photoalter stromal tissue at only said focal point;

moving said focal point of said pulsed laser beam along a predetermined path within the stroma of the cornea to photoalter a layer of stromal tissue having a preselected shape, said layer being an interface between the interior surface of said flap and a bed of stromal tissue;

incising the cornea between the anterior surface of the cornea and the preselected layer to create a peripheral edge for said flap, said flap substantially overlying said bed of stromal tissue;

lifting said flap to expose said bed of stromal tissue;

photoaltering at least a portion of said bed of stromal tissue to create a void in the stromal tissue of the cornea; and

replacing said flap over said void.

13. A method as recited in claim 12 wherein said void is lens-shaped having an anterior surface, a posterior surface and an annular surface.

14. A method as recited in claim 13 wherein said anterior surface is concave shape.

15. A method as recited in claim 13 wherein said posterior surface is convex shape.

16. A method as recited in claim 13 wherein said anterior surface is convex shape.

17. A method as recited in claim 12 wherein said bed of stromal tissue has a boundary and said boundary is substantially in the shape of a circle.

18. A method as recited in claim 12 wherein said bed of stromal tissue has a boundary and said boundary is substantially in the shape of a oval.

19. A method as recited in claim 12 wherein said photoaltering step is accomplished using an excimer laser.

20. A method as recited in claim 12 wherein said peripheral edge of said flap is formed with a tab to assist in lifting and repositioning of said flap.

21. A method as recited in claim 12 wherein said peripheral edge of said flap is formed with an interlocking feature to hold said flap in place after said repositioning step.

22. A method as recited in claim 12 wherein said photoaltering step is accomplished using a pulsed infrared laser.

23. A method as recited in claim 12 wherein said photoaltering step is accomplished using a visible pulsed laser.

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